



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,128	11/09/2005	Hiroto Sugahara	040447-0269	4376

22428 7590 01/29/2009
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

AFSHAR, KAMRAN

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

01/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,128	Applicant(s) SUGAHARA, HIROTO	
	Examiner KAMRAN AFSHAR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/09/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities:

CFR 1.78(a) (iii) requires the sentence in any non-provisional application

(iii) If the later-filed application is a nonprovisional application, the reference required by this paragraph must be included in an application data sheet (§ 1.76 <appr 1 76.htm>), or the specification must contain or be amended to contain such reference in the first sentence(s) following the title. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 25 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In accordance with the claimed language "A computer program product that, when executed, causes a computer to perform a

Art Unit: 2617

method for estimating a radio wave propagation environment in an investigation object area " as recited in claim 25. Such that Computer program product can be broadly reasonable interpreted as a program, per se, which is not a statutory.

Allowable Subject Matter

4. Upon proper overcome of the objection and rejection as discussed above in items 1-3, Claims 1-25 would be allowed.

The following is an examiner's statement of reasons for allowance: 1-25.

With respect to claim 1, Rappaport (U.S. Patent 7171,208 B2) is the closest prior art to the application invention which discloses i.e. The calculations combine the electromechanical properties of each component in the wireless communication system (e.g., noise figure, attenuation loss or amplification, antenna radiation pattern, etc.), the electromagnetic properties of the 3-D environmental database, and radio wave propagation techniques (detailed later) to provide an estimate of the wireless system performance. Calculations are performed at each watch point the user has identified, and the graphical display of the watch point is updated to reflect the result of the calculations (See Co. 10, Lines 53-63, Figs. 1-21).

Fourtune (U.S. Patent 5, 623, 429 A1) teaches a technique is disclosed for optimizing the prediction of RF propagation. A three-dimensional environment, such as a building, is modeled as a plurality of surfaces, each surface having a reflection coefficient and a transmission coefficient. The plurality of surfaces are determined by using a plurality of parallel planes to partition the three-dimensional environment into a plurality of volumetric intervals. And that radio propagation in an indoor or outdoor environment can be predicted using a ray-tracing approach (See e.g. Co 1, Lines 57-63, Co. 2, Lines 37-39).

Okanoue (U.S. Pub. No.: 2002/0002046 A1) teaches a propagation environment notification method in a radio communication system constituted by a radio base station and a radio terminal (See e.g. Page 2, ¶ [0013]).

Wanatabe (U.S. Patent 7, 379,710 B2) teaches provide a high-speed and high-accuracy radio-wave propagation characteristic forecasting system and its method and a program by correctly estimating a diffraction phenomenon and combining the phenomenon with the launching method when a ray passes the vicinity of an edge of a structure (See e.g. Co. 3, Line 53-57, Figs. 1-19).

However, the prior art of record fails to disclose singly or in combination to render obvious that the radio wave propagation characteristic estimation system comprising: first means for finding general radio wave propagation situation within the investigation object area or in vicinity thereof; second means for preparing finite pseudo transmission sources to simulate the general radio wave propagation situation; and third means for conducting detailed radio wave propagation estimation by designating the finite pseudo transmission sources as new transmission sources and designating an analysis area including the investigation object area as an analysis object.

With respect to claim 13, the prior art of record fails to disclose singly or in combination to render obvious that the radio wave propagation characteristic estimation method comprising: a first step of finding general radio wave propagation situation within the investigation object area or in vicinity thereof; a second step of preparing finite pseudo transmission sources to simulate the general radio wave propagation situation; and a third step of conducting detailed radio wave propagation estimation by designating the finite pseudo transmission sources as new transmission sources and designating an analysis area including the investigation object area as an analysis object.

With respect to claim 25, the prior art of record fails to disclose singly or in combination to render obvious that the radio wave propagation characteristic estimation method comprising: provided, the computer program product comprising: processing for finding general radio wave propagation situation within the investigation object area or in vicinity thereof; processing for preparing finite pseudo transmission sources to simulate the general radio wave propagation situation; and processing for conducting detailed radio wave propagation estimation by designating the finite pseudo transmission

Art Unit: 2617

sources as new transmission sources and designating an analysis area including the investigation object area as an analysis object.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Furukawa (U.S. Pub. No.: 2002/0107663 A1).

b) Kitayoshi (U.S. 5, 752, 167 A1).

c) Watanabe (U.S. Pub. No.: 2005/0088165 A1).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Eng, George** can be reached @ (571) 272-7495. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamran Afshar/

Primary Examiner, Art Unit 2617